REMARKS

Claims 1 - 9 remain active in this application. The specification has been reviewed and editorial revisions made where seen to be appropriate. Serial numbers and Patent numbers have been supplied in accordance with docket numbers for identification of applications incorporated by reference in the specification as originally filed.   Claim 6 has been amended editorially. New claim 10 has been added to more fully recite the subject matter of the invention. Substantially verbatim support for new claim 10 is found on page 15, lines 1 and 2. No new matter has been introduced into the application. The indication of acceptance of the formal drawings filed October 22, 2001, is noted with appreciation.

Claims 1 - 6 have been rejected under 35 U.S.C. §102 as being anticipated by Wise et al., claim 7 has been rejected under 35 U.S.C. §102 as being anticipated by Luyster and claims 8 - 9 have been rejected under 35 U.S.C. §103 as being unpatentable over Luyster in view of Wise et al.. These grounds of rejection are respectfully traversed since the references relied upon do not contain the teachings or suggestions which the Examiner attributes to them.

The invention is directed to a data format using flags to indicate whether or not the block of intermediate data or the intermediate data for an entire frame has certain commonly occurring features which result from data compression which ordinarily (for example, under the JPEG standard) must be detected by testing of each pair of bytes (used for each AC coefficient) for non-zero value coefficients and/or whether or not extra bits are required for unique coding of coefficient values and other processing such as loading (sixteen) zero-valued coefficients during decoding. By indicating either or both of these

conditions on the compressed data with flag bits for
each block or frame, such testing become unnecessary
which reduces by a factor of two to four the number of
memory read and write operations necessary to obtain
the coefficient information from the compressed code
(see page 14, lines 4 - 22) and reduces processing time
sufficiently to allow other common operations such as
rotation to be performed with practical levels of
processing power.

Wise et al. details processing pipelines which can
process data in accordance with JPEG, MPEG and H.261
standards in which MPEG Huffman codes are converted to
JPEG Huffman codes and the processing stages can be
reconfigured at run time. In regard to claim 1, the
Examiner relies on the text of Wise et al. at column
40, lines 1 - 51 and column 223, line 66 through column
224, line 3. Column 40 describes Figure 6 which is an
example of circuitry to decode a token address field as
noted at column 39, lines 49 - 50. This address field
is made up of words (in this case, eight-bit words -
column 40, lines 2 - 5). Each word has an extension
bit to indicate whether the address token is complete
within the eight-bit word or if the next eight-bit word
is a continuation thereof. The address (as distinct
from the coefficient values claimed) information is
provided in multiples of exactly eight bits plus the
extension bit and thus does not answer the claim
recitations of "if all said coefficient values in said
block are coded in eight bits *or fewer*" (emphasis
added). Further and more importantly, the extension
bit is not indicating is *all* the values (coefficients
or otherwise) in the block are coded in eight bits or
fewer but applies only to each eight bit word and the
following word and thus must be detected (e.g. tested
for) in regard to each word. Therefore, it is clearly
seen that the decoding of an address token does not
answer the recitations of the claims and is not even a

similar operation which might be arguably applicable to coefficient values and, even is applicable, would not provide the meritorious effects of the invention.

The passage of Wise et al. at columns 223 and 224 is discussing the zero run length (ZRL) comparator as part of the Huffman state machine. The context of this passage is provided in the preceding sentence which reads: "The other two values are constants, one is the value zero and the other is 12 (the index of ESCAPE in MPEG and H.261)." In the passage relied upon by the Examiner, the constant zero is used in the case of fixed length codes and the constant 12 is used in the case of variable length codes and these constants are stored in registers and the numbers 7 and 8 are Huffman "table numbers" and not the number of bits to represent a particular coefficient value. Therefore, this passage describes subject matter very different from that claimed and does not anticipate any recitation of any claim in this application.

In regard to claims 2 and 3, the use of DCT coefficients and AC coefficients are common to JPEG, MPEG and H.261 processing but are distinguished from Wise et al. for the reasons discussed above. In regard to claims 4 and 5, the Examiner again relies on the above-noted passage of column 40 and it is again pointed out that Wise et al. requires detection or testing more than once per frame and more than once per block and, in any case, is testing address values and not coefficients. The testing step described in lines 46 - 55 is for a zero value of the DC DCT coefficient value which is performed once per block (since it occurs once per block) but is not testing AC coefficients or all coefficients to determine if the respective magnitudes thereof all fit into eight bits. In regard to claim 6, as discussed above in regard to the passage bridging columns 223 and 224, it is again respectfully pointed out that the Huffman decoder

hardware is looking at the compressed data to *decode* a
ZRL.   There is no *flag* stored with the block of
intermediate data to indicate that *no ZRL is present* in
the block.

Accordingly, it is respectfully submitted that
Wise et al. does not anticipate any claim in the
application and does not contain the teachings or
suggestions that the Examiner attributes to it
(evidently through hindsight construction of Wise et
al. or simply a lack of understanding of the invention
and the significance of claim language) but, rather,
the passages of Wise et al. relied on by the Examiner
are directed to something very different from that
claimed and do not answer the explicit recitations of
any claim in the application.

In regard to claims 7 - 9, the Examiner relies
upon Luyster.   Luyster (and the three continuation
applications thereof cited by the Examiner and
evidently having the same disclosure) is directed to a
data encryption system for encrypting an n-bit block of
data in a plurality of rounds and thus is not directed
to *image* data *compression* systems or the data format of
encoded image data including *coefficient values* at all.
While Luyster uses some notations similar to some claim
terms but the information represented by the notations
is much different from the usage in the present
specification and claims and the similarity is entirely
coincidental.   Specifically, column 22, line 8, defines
"K1" as a "first subkey value" and thus "Klast" is a
"last subkey value" as stated at column 23, line 42,
whereas, in contrast, Klast, as used in the present
specification and claims, is an *index* (e.g. location)
of the last non-zero quantized coefficient.   The
subkeys are used for respective rounds of the
encryption process and are not data, much less image
data represented by coefficient values and are not
stored with a block of such data (which would be

contrary to the purpose of encryption). On the contrary, there is no discussion of coefficient values in Luyster and "flags" in Luyster are not combined with Klast, as claimed and are used to control encryption rather than, as in the present invention, to provide information about the code *to facilitate decoding thereof. It would be difficult to imagine a purpose more diametrically opposed to the purpose of the claimed code format.*
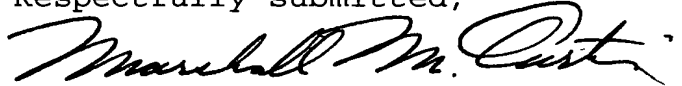
Therefore, it is abundantly clear that Luyster does not, in fact, anticipate claim 7 and its deficiencies are not mitigated by the teachings or suggestions of Wise et al. as discussed above. The Examiner has not made and cannot make a *prima facie* demonstration of anticipation or obviousness of any claim in the application based on Wise et al. and/or Luyster. Both of these references are far afield from the invention and bear virtually no similarity thereto but have been construed by the Examiner, through hindsight or a lack of understanding of the claimed invention and the references relied upon largely contrary to the teachings and suggestions actually contained therein. Accordingly, reconsideration and withdrawal of the grounds of rejection of record are respectfully requested.

Since all rejections, objections and requirements contained in the outstanding official action have been fully answered and shown to be in error and/or inapplicable to the present claims, it is respectfully submitted that reconsideration is now in order under the provisions of 37 C.F.R. §1.111(b) and such reconsideration is respectfully requested. Upon reconsideration, it is also respectfully submitted that this application is in condition for allowance and such action is therefore respectfully requested.

If an extension of time is required for this response to be considered as being timely filed, a

conditional petition is hereby made for such extension
of time.   Please charge any deficiencies in fees and
credit any overpayment of fees to Deposit Account No.
50-0563 of International Business Machines Corporation
(Research Triangle Park).

Respectfully submitted,

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